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A NEW EXTINCT SPECIES OF CYPRINIDÆ.

BY E. D. COPE.

Dr. J. Lindahl, Geologist of Illinois, recently sent me some specimens of fossil fishes which were found in Pulaski County, in the southern part of that State. They are indifferently preserved on laminae of a papier kohl of lacustrine origin, which is frequently impregnated with pyrite. Five specimens present characters of value, but no one of them is sufficiently well preserved to furnish all the necessary definitions. However, the specimens agree in all points where comparisons can be made, so that I believe them to pertain to a single species.

The characters displayed by this fish refer it to the Cyprinidæ, and to the neighborhood of the genus *Leuciscus*. In specimen No. 8,402 a cast of one of the inferior pharyngeal bones is preserved, and this displays three obtusely conical teeth of an external row, and a trace of a single smaller tooth of the internal row. There was apparently another tooth of the external row inferior to and larger than the others; the four forming a series on a curved line corresponding with the axis of the bone. The apices of these teeth are not perfect. The fins do not present any conspicuous spines; and the front of the dorsal fin is above the ventral; mouth terminal. These characters would refer this fish to *Minnilus* or *Chiola*, but another character appears to distinguish it from these. This is the absence of scales. In none of the dozen specimens sent is any trace of scales to be found. As compared with the scaleless genera, the American *Meda*, and the Old World *Aulopyge*, the present fish differs in the absence of conspicuous spines at the front of the dorsal and anal fins. Supposing the absence of scales to be normal, I refer the Illinois species to a new genus under the name of *Aphelichthys*. The species I describe as

Aphelichthys lindahlæ sp. nov.

The specific characters are derived from four specimens. These I tabulate as follows:

	Dorsal Vert.	Caudal Vert.	Fin rays.			
			D.	A.	V.	C.
No. 8,402.....	15		12	11		
No. 8,404.....	16	19-20	13	11	7	15
No. 8,397.....	15	20				

The caudal fin is emarginate. The general form is moderately slender, much as in our chubs of the genus *Semotilus*. The length of the head measured above, enters the length to the caudal notch about five times; and when measured on the side about four times; and the depth at the front of the dorsal fin enters the same about four times. The mouth is directed obliquely upward, and its rictus appears to be nearly in the line of the anterior border of the orbit. The paired fins are rather short, the pectorals not reaching the ventrals, nor the ventrals the anal (No. 8,404). The borders of the dorsal and anal are straight (8,402, 8,404). The ribs and vertebral spines are slender. The vertebral bodies have on each side a longitudinal median keel, which is bounded above and below by a fossa.

DIMENSIONS.

	MM.
Length of superior surface of head of No. 8,402.....	15·5
Length of No. 8,404a to notch of caudal fin.....	39·5
Length of head of No. 8,404a on side.....	9
Total length of No. 8,397.....	160
Length of head of No. 8,397 on side.....	41
Length from end of muzzle to origin of dorsal fin (No. 8,397)	77

The earliest Cyprinidæ in North America whose horizon is positively known are from the Idaho beds of Idaho and eastern Oregon, which are of Pliocene age. It is likely that the lake deposit in which the *Aphelichthys lindahlæ* is found is not of an earlier age than the Idaho beds. Species of existing genera of the family occur, however, in the middle Miocene of Europe. I dedicate the species to my friend Dr. Josua Lindahl, State Geologist of Illinois.